

CLAIMS:

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1. A system for servicing a medical diagnostic apparatus, the system comprising:

5 a diagnostic apparatus including a service server for originating a service request and a network communications module for transmitting the service request;

a service facility remote from the diagnostic apparatus, the service facility including a network server for receiving the service request and exchanging data with the apparatus in response to the service request.

10 2. The system of claim 1, wherein the diagnostic apparatus includes a network browser user interface for defining the service request originated by the server and transmitted by the network communications module.

15 3. The system of claim 1, further comprising a data storage device coupled to the network server, the data storage device storing service data representative of identifying or operational parameters of the diagnostic apparatus.

20 4. The system of claim 1, wherein the service data includes data representative of an apparatus type and location.

25 5. The system of claim 1, further comprising at least one field service unit, the field service unit including a network browser and a network communications module for linking the field service unit to the service facility network server.

30 6. The system of claim 1, wherein the service facility includes a messaging circuit configured to formulate and transmit a message to the diagnostic apparatus in response to the service request.

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7. The system of claim 1, wherein the service facility includes a scheduling circuit for scheduling service of the diagnostic system in response to the service request.

5 8. An apparatus for providing service to medical diagnostic systems, the apparatus comprising:

a plurality of medical diagnostic systems, each diagnostic system including a diagnostic station, a station interface for accessing data from the station, an operator interface for initiating service requests, and communications circuitry for transmitting and receiving data; and

10 a service facility linked to the plurality of medical diagnostic systems via a network, the service facility including a server for transmitting data to and receiving data from the plurality of medical diagnostic systems via the network.

15 9. The apparatus of claim 8, wherein at least two of the plurality of medical diagnostic systems include stations of different modality types.

20 10. The apparatus of claim 9, wherein the different modality types include magnetic resonance imaging stations, computed tomography stations, x-ray stations or ultrasound stations.

25 11. The apparatus of claim 8, wherein at least two of the medical diagnostic systems are coupled to a management station via an intranet in a medical facility, and wherein the management station is linked to the service facility via the network.

30 12. The apparatus of claim 8, wherein the communications circuitry is coupled to the station interface for transmitting data representative of station operating parameters to the service facility.

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13. The apparatus of claim 8, wherein each diagnostic system includes a memory circuit for storing log data representative of serviceable conditions

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occurring in the diagnostic system, and wherein the communications circuitry is coupled to memory circuit and transmits the log data to the service facility.

14. The apparatus of claim 13, wherein the log data is transmitted in response to a prompt from the service facility.

15. A system for remotely servicing medical diagnostic equipment, the system comprising:

a first medical diagnostic station of a first modality, the first medical diagnostic station including a service server for accessing data representative of a serviceable condition of the first station;

a second medical diagnostic station of a second modality different from the first modality, the second medical diagnostic station including a service server for accessing data representative of a serviceable condition of the second station;

a service facility remote from the first and second stations, the service facility including a server for interactively exchanging service data with the first and the second stations.

16. The system of claim 15, wherein the first and second modalities are selected from a group consisting of magnetic resonance imaging systems, computed tomography systems, x-ray systems and ultrasound systems.

17. The system of claim 15, wherein the first and second stations each include an operator interface for initiating a service request and a communications circuit for transmitting the service request to the service facility.

18. The system of claim 17, wherein the service facility server is configured to transmit an acknowledgment message to the first or the second station in response to a service request from the respective station.

19. The system of claim 17, wherein the service facility server is configured to prompt data representative of a serviceable condition in response to a

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service request from the first of the second station, and wherein the first and the second stations are configured to transmit the data representative of the serviceable condition in response to the prompt.

5           20.     The system of claim 15, wherein the serviceable condition includes a malfunction in an imaging sequence in the first or the second station.

          21.     The system of claim 15, wherein the serviceable condition includes a request for operator useable information.

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          22.     A method for providing remote service to a medical diagnostic system, the method comprising the steps of:

                  originating a service request in the medical diagnostic system via a user interface;

                  transmitting the service request to a service facility via a network connection;

                  acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.

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          23.     The method of claim 22, comprising the further step of transmitting data from the medical diagnostic system to the service facility representative of a potential malfunction of the medical diagnostic system.

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          24.     The method of claim 23, wherein the data is transmitted from the medical diagnostic system to the service facility in response to a prompt by the service facility.

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          25.     The method of claim 24, wherein the prompt is generated by the service facility automatically in response to the service request.

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26. The method of claim 22, comprising the further step of transmitting from the medical diagnostic system data representative of the diagnostic system type and identification.

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27. The method of claim 22, wherein the service request is generated through a preconfigured browser page accessible on the user interface.

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28. The method of claim 22, comprising the further step of displaying a visual indicia at the diagnostic system indicating receipt of the electronic acknowledgment message from the service facility.

29. A method for exchanging service data between a plurality of medical diagnostic systems and a central service facility, the method comprising the steps of:  
composing a service message on a medical diagnostic system;  
linking the medical diagnostic system to a remote service facility via a network connection;  
transmitting the service message from the diagnostic system to the remote service facility; and  
automatically replying to the service message by the service facility to the diagnostic system via a return electronic message.

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29. A method for exchanging service data between a plurality of medical diagnostic systems and a central service facility, the method comprising the steps of:  
composing a service message on a medical diagnostic system;  
linking the medical diagnostic system to a remote service facility via a network connection;  
transmitting the service message from the diagnostic system to the remote service facility; and  
automatically replying to the service message by the service facility to the diagnostic system via a return electronic message.

30. The method of claim 29, wherein the service message is composed via a user interface.

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31. The method of claim 29, wherein the service message includes data uniquely identifying the medical diagnostic system.

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32. The method of claim 31, comprising the further step of automatically accessing electronic records by the service facility in response to the service message.

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33. The method of claim 32, wherein the electronic records include data representative of a subscriber status of the diagnostic system.

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34. The method of claim 32, wherein the electronic records include data representative of service history for the diagnostic system.

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35. The method of claim 29, comprising the further steps of:  
determining at the service center log data required to reply to the service message;  
automatically linking the service facility to the diagnostic system via a network connection, and  
transmitting the log data from the diagnostic system to the service center.

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36. A method for servicing a plurality of medical diagnostic systems, the method comprising the steps of:

generating a first service request message in a first diagnostic system of a first modality;

generating a second service request message in a second diagnostic system of a second modality different from the first modality;

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transmitting the first and second service request messages to a service facility remote from the first and the second diagnostic systems; and

transmitting an acknowledgment messages from the service facility to the first and second diagnostic system.

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37. The method of claim 36, wherein the first and second modalities are selected from a group including magnetic resonance imaging systems, computed tomography imaging systems, x-ray imaging systems and ultrasound imaging systems.

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38. The method of claim 36, including the further step of displaying operator perceptible indicia at the first and second diagnostic systems indicating receipt of the acknowledgment messages.

39. The method of claim 36, wherein the first and second service request messages include data uniquely identifying the respective diagnostic system.

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40. The method of claim 36, comprising the further steps of:  
establishing a network link between the service facility and the first and the second diagnostic system; and  
transmitting parameter data from the diagnostic systems to the service facility, the parameter data including information indicative of a serviceable condition.

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41. The method of claim 36, comprising the further steps of:  
establishing a network link between the service facility and the first and second diagnostic systems, and  
transmitting service data from the service facility to the first and second diagnostic systems in response to the service request message.

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42. The method of claim 41, wherein the service data includes configuration parameter data for the diagnostic system.

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43. The method of claim 41, wherein the service data includes operator instructions adapted to the modality of the respective diagnostic system.

44. The method of claim 36, wherein the service facility includes a plurality of service facilities disposed at locations remote from one another.

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